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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/824,350	04/15/2004	Nam Seon Cho	0465-1165PUS1	6334
2292	7590	06/21/2006	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			ING, MATTHEW W	
			ART UNIT	PAPER NUMBER
			3637	

DATE MAILED: 06/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/824,350	<b>Applicant(s)</b> CHO, NAM SEON	
	<b>Examiner</b> Matthew W. Ing	<b>Art Unit</b> 3637	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 15 April 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 April 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Priority*

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### *Drawings*

2. Figures 1-3 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g).
3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: "F". See Figure 2.
4. The drawings are objected to under 37 CFR 1.83(b) because they are incomplete. 37 CFR 1.83(b) reads as follows:

When the invention consists of an improvement on an old machine the drawing must when possible exhibit, in one or more views, the improved portion itself, disconnected from the old structure, and also in another view, so much only of the old structure as will suffice to show the connection of the invention therewith.

In particular, the drawings fail to clearly illustrate how the supporting member (40) fits into the groove (21).

5. The drawings are objected to because of the absence of section lines. Although Figure 4 clearly shows a cross-section, there are no section lines in Figures 5 or 6 indicating the location of the cross-sectional view shown in Figure 4.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing

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should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### *Specification*

6. The abstract of the disclosure is objected to because of the inclusion of legal phraseology, specifically, the word "disclose" (page 16, line 2). Correction is required. See MPEP § 608.01(b).

7. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

8. The disclosure is objected to because of the following informalities:

9. The word "provided" is used in a manner inconsistent with its commonly-accepted meaning, i.e., "to furnish; supply; make available; afford". See page 9, lines 2, 9, 14, and 16;

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and page 10, line 12. In these instances, the examiner recommends changing the word “provided” to “located”. See also page 9, line 22, where the examiner recommends changing the word “provided to “comprised”.

10. The word “hole” is used in a manner inconsistent with its commonly-accepted meaning. See page 11, lines 6-9 and 12. In these instances, the examiner recommends changing the word “hole” to “recess” or “groove”. The examiner points out that, in the claims, the term that apparently corresponds to this particular feature is “groove”, not “hole”. The examiner also points out that, although the word “hole” can refer to a cavity with sides and a bottom, it can also refer to a cavity that, although possessing sides, lacks any bottom.

11. The phrase “outer feature” is used in a nonsensical manner. See page 9, lines 13-15, and page 11, line 16. In these instances, the examiner recommends changing the phrase “outer feature” to “appearance”.

12. The phrase “support the strength of” is used in a nonsensical manner. See page 9, line 9. The examiner recommends changing the aforementioned phrase from “support the strength of” to “reinforce”.

13. The phrase “to have” is used in a nonsensical manner. See page 9, line 18. The examiner recommends changing the aforementioned phrase from “to have” to “with”.

Appropriate correction is required.

14. The specification is objected to because reference character “21” has been used to designate both a “hole” (page 11, lines 6-9 and 12) and a “handle holder” (page 11, lines 12-13).

15. The specification is objected to because reference characters “10” (page 8, line 22) and “21” (page 11, lines 12-13) have both been used to designate the “handle holder”.

***Claim Objections***

16. Claims 3, 11, 12, 14 and 15 are objected to because of the following informalities: The word “provided” is used in a manner inconsistent with its commonly-accepted meaning, i.e., “to furnish; supply; make available; afford”. See page 13, line 13; page 14, lines 13, 16, and 21; and page 15, line 1. In these instances, the examiner recommends changing the word “provided” to “located”. Appropriate correction is required.

17. Claim 10 is objected to because of the following informalities: the inclusion of the reference character “(2)” (see page 14, line 9), which does not correspond to the reference characters (“16” and “17”) whereby the screws are designated in both the written description and the drawings. Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

18. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

19. Claims 1-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

20. Regarding Claims 1 and 16, the preamble in each claim, which reads as follows, “A door assembly of a refrigerator, comprising...” implies that the claim is directed towards a door assembly. However, the first limitation of each claim reads “a door opening and closing the refrigerator...”, wherein the positive language of the claim implies that the claim encompasses the refrigerator, as well as the door and handle upon which the claim language subsequently focuses. This language renders these claims indefinite, since it fails to clearly indicate whether

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claims are directed to a handle of a refrigerator door, or the entire refrigerator structure of which said handle is a component. For the purposes of examination, the examiner is considering the claims to be directed to the entire refrigerator, to include the refrigerator body as part of the claimed structure of the invention.

21. Regarding Claims 6 and 7, the word “groove” renders the claim indefinite, since it is uncertain, given the terminology used in the specification, what aspect of the claimed invention this word refers to. The examiner points out that the only use of the word “groove” in the written description is in the discussion of prior art, wherein the word “groove” is used synonymously with the phrase “sliding guide” (page 4, line 14). Meanwhile, the feature (Item 21 in Figure 6) to which the word “groove”, as used in the claims, appears to correspond, is termed a “hole” throughout the written description (see page 11, lines 6-9 and 12). For the purposes of examination, the examiner is considering the word “groove” to refer to Item 21 in Figure 6.

22. Regarding Claim 16, the word “each” (page 15, line 8) renders the claim indefinite, since it is unclear whether the word “each” is referring to the handle holders or the ends of said handle holders. For the purposes of examination, the examiner is considering the word “each” to refer to the handle holders.

23. Claims 2-5 and 8-15 are considered indefinite since they depend from an indefinite base claim.

#### ***Claim Rejections - 35 USC § 103***

24. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

25. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

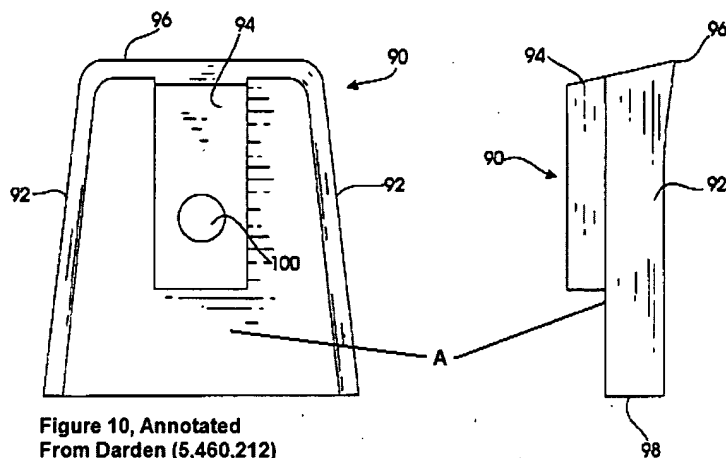
26. Claims 1-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art disclosed by the applicant in Figures 1-3 of his application, in view of Darden (5,460,212) and Sueyoshi (2002/0152582). The prior art of Figures 1-3 teaches the structure substantially as claimed above, including a refrigerator (1); a door (3) opening and closing said refrigerator, said door being a sliding door; a handle (4) located on a side of the door, said handle being located on a front side of the refrigerator; and a plurality of handle holders (5) each having an end fixed to the door and another end attached to the handle; said handle holders being located on each side of the handle, and being fixed to the door by at least two screws penetrating the handle holder.

27. The only difference between the admitted prior art of Figures 1-3 is that and the structure claimed by the applicant is that the admitted prior art fails to teach a groove, being formed on the door, for inserting the supporting member, wherein a depth of the groove is the same as a thickness of the supporting member; and a supporting member provided on each of the handle holders and preventing damage from occurring on the handle holder; said supporting member being protruded downwards on a lower surface of the handle holder; said supporting member being located on a contacting surface between the handle holder and the door; said supporting



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member having a width smaller than that of the handle holder; said supporting member being integrated with the handle holder; said supporting member being provided at a surrounding region of a hole through which the screws are penetrated; said supporting member being provided on a lower surface of a surrounding region of a hole through which a screw closer to the handle is penetrated.



28. Sueyoshi, however, teaches a groove (12), being formed on the door, for inserting the supporting member (17). See Figure 2. Additionally, Darden teaches the shaping of a groove (84) to accommodate a supporting member (94), such that the depth of the groove is the same as a thickness of the supporting member (see Figures 1, 3, 9, and 10). Darden also teaches the inclusion of a supporting member (94) on an attachable structure (92) to be attached via screw to a larger structure (44), wherein the supporting member is protruded downwards on a lower surface (Item A – see Figure 10 Annotated, above) of the attachable structure (92); said supporting member being located on a contacting surface (Item A – see Figure 10 Annotated, above; see also Figures 1 & 3 of Darden) between the attachable structure (92) and the larger structure (44); said supporting member having a width smaller than that of the handle holder (see Figures 1 & 3); said supporting member being integrated with the handle holder (see Figures 9

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and 10); said supporting member being provided at a surrounding region of a hole through which the screws are penetrated (see Figures 3 & 9); said supporting member being provided on a lower surface of a surrounding region of a hole through which a screw closer to the handle is penetrated (see Figures 3 & 9).

29. The examiner points out that the attachable structure (92) of Darden can be analogized to the handle holder of the admitted prior art, in that both are smaller structures being fixed via screws to larger structures; and that, in this light, Darden can be seen as merely teaching the inclusion of a supporting member on any generic attachable structure. The examiner also points out that, although the larger structure (44) of Darden cannot be easily analogized to any type of door, Sueyoshi, as mentioned above, teaches the inclusion of a groove upon a door for the purposes of accommodating a supporting member. The examiner also points out that the inclusion of the supporting member taught by Darden on the underside of handle holder of the admitted prior art would obviously have the beneficial side-effect effect of providing structural reinforcement to said handle-holder; and would obviously serve to lessen the probability of failure due to fatigue. It would therefore have been obvious to one of ordinary skill in the art to incorporate the groove of Sueyoshi, and the supporting member and groove shape of Darden, into the handle holder and refrigerator door of the admitted prior art in order to provide a more secure connection between the handle-holder and door, thereby providing the structure substantially as claimed.

### ***Conclusion***

30. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Josserand (6,401,302), Du (6,672,867), Kubelka (1,652,018), Loffler (5,084,940),

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and Kim (2005/0066479) teach the formation of a recess upon a door. Michael (3,545,061), Kezran (3,545,060), Knipple (1,629,667), Pataky (3,885,282), Weill (4,209,047), Jonsson (4,709,737), Larsson (6,146,061), Wing (2004/0010888), and Camarota (5,297,010) teach the inclusion of a supporting member on an attachable structure. Lindsay (6,834,692), Satran (6,536,996), Gearon (235,425), Trevarrow (3,629,919), and Eriksson (4,852,622) also teach the inclusion of a supporting member on an attachable structure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew W. Ing whose telephone number is (571) 272-6536. The examiner can normally be reached on Monday through Friday, 7:30 am - 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lanna Mai can be reached on (571) 272-6867. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MWI

13 June 2006

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